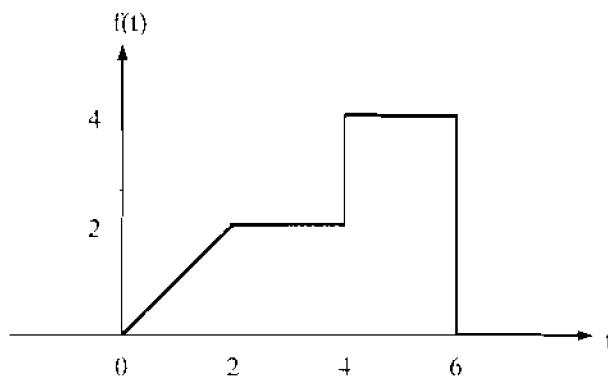


EE 207 – Fall 2009  
Quiz 1

SER	ID	NAME <b>KEY</b>
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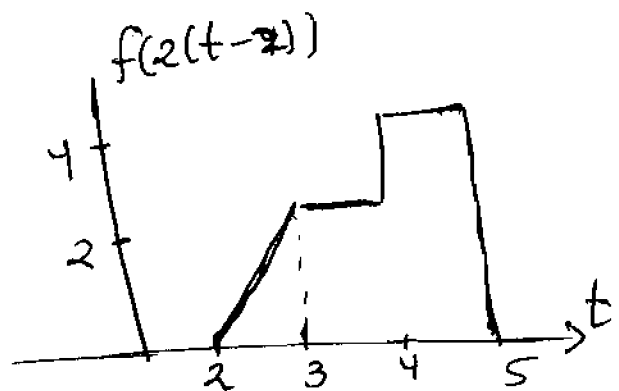


For the signal  $f(t)$  shown above :

- (a) Expand  $f(t)$  on terms of singularity functions ?
- (b) Plot the function  $f(2t - 4)$  ?
- (c) Is the signal  $f(t)$  a power or an energy signal , *Explain* ?

(a)  $f(t) = r(t) - r(t-2) + 2u(t-4) - 4u(t-6)$

(b)  $f(2t-4) = f(2(t-2))$



(c)  $E = \int_{-\infty}^{\infty} f^2(t) dt = \int_0^2 (t)^2 dt + \int_2^4 2^2 dt + \int_4^6 4^2 dt$

$= \frac{128}{3} < \infty$

$\Rightarrow$  Energy signal .